APPENDIX C SITE INSPECTION REPORTS



SLDS 5-YEAR REVIEW SITE INSPECTION CHECKLIST

I. Site Information

Site Name: St. Louis Downtown Site	Date of Inspection: May 8 - 9, 2003
Site Location: City of St. Louis	EPA ID:
EPA Region: Region 7	Weather/temp: Rainy / 65°
Agency leading the five-year review: U. S. Army Corps of Engineers, St. Louis District	Attachments: ✓ Inspection team: J. Mattingly (USACE), D. Wall (USEPA), J. Wade (MDNR) ✓ Site map (attached)
Response Action Includes: √ Excavation of radiologically contaminated soil facility √ Access controls √ Surface water collection and treatment	and shipment to an out-of-state disposal
$\frac{\sqrt{\text{Groundwater monitoring}}}{\sqrt{\text{Other (Air monitoring)}}}$	

II. Interviews

Interview sheets for each individual will be maintained.

III. On-Site Documents & Records Verified (Check all that apply.)

1. O&M Documents			
O&M Manual	Readily available ڤ	Update needed ڤ	√ NA at present
As-built drawings	$\sqrt{\text{Readily available}}$	Update needed ف	NA ڤ
Maintenance logs	$\sqrt{\frac{1}{2}}$ Readily available	Update needed ف	NA ڤ
Remarks:			
2. Site-Specific Health & Safety P	lan		
Site-Specific Health & Safety Plan	<u>√</u> Readily available	Update needed 🏝	NA ڤ
Contingency plan/emergency	Readily available	Update needed ٹ	NA ڤ
response plan			
Remarks:			
3. O&M and OSHA Training Rec	ords		
O&M Training Records	Readily available ف	Update needed ٹ	NA at present ف
OSHA Training Records	<u>√</u> Readily available	Update needed ڤ	NA ڤ
Remarks:			
4. Permits and Service Agreement	ts		
Air discharge monitoring	√ Readily available	Update needed ڦ	NA ڤ
Effluent discharge (MSD)	Readily available	Update needed ف	NA ڤ
Waste disposal	Readily available	Update needed ف	NA ڤ
NPDES permit	Readily available ث	Update needed ف	<u>√</u> NA
Other (see remarks)	Readily available	Update needed ف	NA ڤ
Remarks	-	-	
Other permits maintained on-site in	cluded the St. Louis City	y Street Closure Permit fo	r Angelrodt & Buchannan),
and Right-of-Entry permits with peri			
5. Groundwater Monitoring		<u> </u>	

Groundwater Monitoring Records $$ Readily available	NA ث Update needed
Remarks:	•
See Annual Environmental Monitoring and Data Analysis	
Report.	
6. Discharge Compliance Records	
Air $\underline{\checkmark}$ Readily ava	
Water (effluent) $\underline{}$ Readily ava	nilable
Remarks:	
See Annual Environmental Monitoring and Data Analysis Report.	
7. Access / Security	
Daily Access/Security Logs	NA ف Update needed ف NA
Remarks:	
8. Institutional Controls	
Long-term Stewardship Plan ف Readily ava	iilable $\stackrel{.}{\smile}$ Update needed $\stackrel{.}{\lor}$ NA at present
Notification letters to city, county, state, utilities, $$ Readily ava	
property owners regarding radiological	
contamination and measures to protect human	
health/environment	
Deed restrictions in place ت Readily ava	iilable نا Update needed \sqrt{NA} at present
Remarks:	
IV. O&M Costs	\sqrt{NA} NA at present
1.O&M Organization	
Contractor for State 👛 Contractor for State	PRP in-house ڤ
Federal Facility in-house ث	Contractor for Federal Facility ف
Other (explain) ٿ	
2.O&M Cost Records	
Up to date ث Readily available	Funding mechanism/agreement in place ف
Original O&M cost estimate	Breakdown attached 🖆
Total annual cost by year for review period if available:	
From To	
Date Date Total cost	
FromTo	
Date Date Total cost	
From ToTo	Breakdown attached
Date Date Total cost	* D 11 // 11
From ToTo	Breakdown attached
Date Date Total cost	Porto J (Describe acate 1)
3. Unanticipated or Unusually High O&M Costs During Revie	w reriod (Describe costs and reasons):
Remarks:	
V. Access & Institutional Controls	
1. Fencing	
	maintenance <u>Location shown on map</u>
	Location shown on map
Rad Rope, Signs and other Security measures	Location shown on map ف
Remarks:	

	e excavations only. No conas contact information in contact information in contact information in contact in c				
2. Institutional Contr		asc of efficigenc	·y.	√ NA at presen	t
Implementation and en				<u>v</u> NA at presen	ı
		ed ٿ Yes	, i No	N ڤ	A
	Cs not properly implement		No ڤ مارات	N ف N	
	Cs not being fully enforced	Yes ف	No ڤ	□ N	A
Type of monitoring	g (e.g. self-				
reporting, drive by):					
Frequency:					
Responsible agency:					
Contact Info (Name, T	itle, Date, Phone #):				
Reporting is up-to-date		Yes ڤ	No ڤ	N ڤ	A
Reports are verified by		Yes ڤ	No ڤ	N ف	
	s in deed or decision	Yes ث	No ف	N ف	
documents met				-	
Violations have been re	enorted	Yes ث	No ڤ	N ڤ	A
Remarks:	eported	— 1 C S	-110		7.1
Remarks.					
3. Adequacy				√ NA at presen	t
	Cs are adequate	ICs are ii ڤ	nadequate		NA ڦ
Remarks:	es are adequate	— 105 arc 1	naacquate		- 11/1
Kemarks.					
4. General				√ NA at presen	t
Land use changes or	evident T ⁻ ق	ype:			NA فـ
site	I Evident I	урс.			- IVA
Land use changes of	Evident Ty ٿ	pe:		(NA ڦ
site	-	•			
Vandalism/trespassing	Evident Ty ٿ	pe:		(NA ڦ
Remarks:					
VI. General Site Cond	litions				
1. Road Damage	√ Not relevant	vident & shown	on-site man		
Remarks:	<u> </u>	, 100110 00 bilo ((1)	on site map		
Remarks.					
2. Erosion	√ Not relevant E	vident & shown	on-site man	Depth: Ar	eal extent:
Remarks:		vident & snown	on site map	Deptii. 7ti	cui extent.
Kemarks.					
3 Vegetative Cover (where response action com	nlete and/or acti	on not vet cond	ucted)	
5. Vegetative cover	Cover properly establish		ion not yet cond	Type:	
	Cover shows signs of st. ف			Type.	
	ے Cover shows sighs of sh No cover	1688			
Remarks:	- No cover				
	issinni Divarfrant anly				
Applicable along Missi		- \			NA ق
4. Alternative Cover	(armored rock, concrete, et	.c.)			NA
D 1					
Remarks:					
Well established every	where.				Т
5. Wet					
Areas/Water					
Damage					T
	√ Not evident				
	Wet areas/water damage		wn on map	Areal extent:	
1	Ponding evident and sho ف	wn on man		Areal extent:	1

	Seeps evident and shown on map	Areal extent:	
D 1	Soft subgrade evident and shown on map	Areal extent:	
Remarks:			
6. Slope Instability			
	$\sqrt{}$ Not evident		
	Slides evident and location shown on map	Areal extent	
Remarks:			
7. Dust Suppression	n	NA ڤ	
√ Procedures establ			
	tablished, additional		
needed			
ن Needed ت Remarks:			
Remarks:			
8. Air Monitoring ن NA			
	monitors in place and locations identified on-site map		
	eter air monitors in place and locations identified on-site n	nap	
Air monitors fund	Air monitors require maintenance ف A	ir monitors require i	replacement
properly			
Remarks:			
9. Rail Car Shippin		NA ڤ	
Shipping:		Yes ٿ	No ڤ
Packaging:	Buritto bags properly secured and tied	ند Yes	ان No اف
i ackaging.	Cars loaded properly to prevent holes in the burrito bags		ان No No
Labeling:	All containers, barrels, equipment labeled correctly	ند Yes	ان No No
Placards:	Railcars properly placarded	– ۲es Yes ڤ	– ۱۰۰ No
i idearas.	Placards secured properly to railcars	es کوs	– No No
Remarks:			
No railcars were bei	ng loaded at present due to construction of northern rail l	oad	
out area.			
VIII. Surface Water	Collection & Treatment (During Response Action Onl	y)	
1. Storm water / Er	rosion Control devices	NA ڦ	
<u>√</u> Silt ڦ St	traw bales $\underline{}$ Berms $\underline{}$ Ditche	es	
fencing			
Remarks:			
2. Water Managem	nent Interfaces ث NA		
	areas addressed and excavations protected against cros	ق Yes ڦ	No
contamination?	T	<u>-</u>	
	from excavation areas detained and sampled prior t	to √ Yes	No
discharge?	1 1	_	
Remarks:			
2 Water Treatmen	4 System		
3. Water Treatmen Metals removal		remediation	
Air stripping	Carbon adsorbers	Cinculation	
√ Filters:	— Caroon adsorbers		
Carbon filters – 2 car	rbon: 1 gravel		
Additive: ف	- · · · · · · · · · · · · · · · · · · ·		

Others ڦ		
	Veeds maintenance	
$\sqrt{}$ Sampling ports properly marked		
Sampling/maintenance log displa	ayed and up to date	
$\sqrt{}$ Equipment properly identified		
Quantity of groundwater treated ف		
Quantity of surface water treated	annually: 1 million gallons per year treated	
Remarks:		
4. Tanks, Vaults, Storage Vessels	<u>√</u> N	JA at present
	secondary containment	nce
Remarks:		
5. Surface Water Collection Struc	ctures, Pumps, Pipelines	\sqrt{NA} at present
Collection Structures, Pumps, & Ele		Needs maintenance ف
Remarks:		
6. Surface Water Collection Sp.	are Parts &	
Equipment		
√ Readily	Requires upgrade	Needs to be provided ف
Remarks:		
7. Sedimentation Basin	Functioning ف	<u>√</u> NA
Liner in good condition	Needs maintenance ث	22-1
Outlet rock in good condition	Needs maintenance ث	NA ڤ
Erosion not evident	Erosion evident and located on-site map	
Remarks:		
8. Outfalls	Functioning ث	√ NA
	Sampled after rail event/unplanned release ف	Erosion evident ف
Remarks:		
9. Outlet Works (Manholes)	√ Functioning	NA ڤ
Remarks:		
10. Perimeter Ditches / Off-site D	ischarge	see remarks)
Siltation in Not evident		See Telliarks)
Evident and locatio	on shown on-site map Areal extent	Depth
Vegetativ ن Present but does no		
e Growth	r	
	ocation shown on site map Areal extent	Depth
Erosion $\stackrel{\cdot}{\smile}$ Not evident	1	1
Evident and locatio ف	on shown on-site map Areal extent	Depth
Remarks:	•	•
The SLDS is an industrial site with	significant asphalt / concrete cover. Siltation, ve	egetative growth and erosion do
not pose a problem for this site.		
IV Coord water Maritarina		
IX. Ground-water Monitoring		S
1. Groundwater Monitoring Well	**,	NA ف
		ely sampled
E ف Good condition ث	Needs ن ف vidence of leakage at penetrations	maintenance

Remarks:			
Condition presumed goo	od. Wells and spare equi	pment maintained by separate	e contractor off-site.
2. Monitoring Well Sp	pare Parts and Equipme	ent	
Readily available ث	Good condition 🏝	Requires upgrade ف	Needs to be provided 🏝
Remarks:			
Unknown - SAIC main	tains but was not availab	le the day of the inspection	

X. Other Remedies

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. Overall Observations

1. Implementation of the Remedy

Describe issues and observations relating to response action. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltrations and gas emission, etc.).

The approved remedy for the St. Louis Downtown Site will result in the excavation and out-of-state disposal of radioactively contaminated soil from the Manhattan Project in St. Louis, Missouri. The excavation of impacted soil must occur in and around operating facilities while minimizing disruption to ongoing business operations. Most of the contamination is present under areas covered with asphalt or concrete although some contamination is present in and around buildings or old process structures. Unmarked utilities predating utilities maps, and historical fill materials act as conduits for contamination to migrate to deeper zones than originally anticipated. These features complicate the task of identifying all impacted areas prior to the actual excavation of the site. The project appears to be doing as well as can be expected in overcoming these issues and implementing the selected remedy.

2. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

The process for identifying, monitoring, and managing deep and inaccessible contamination is in the process of being developed and will be evaluated after it is established. A follow-up record of decision (ROD), amendment to the existing ROD, or and explanation of significant differences should be in some stage of development prior to the next five year review. This document will influence the identification of the conceptual process followed by stewardship planning of period monitoring and reporting.

3. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope if O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

Although it is doubtful that they will compromise the protectiveness of the remedy, two issues may arise in the future to challenge how the remedy is being implemented. Fairness issues will arise as it relates to innocent property owners and whether they will be made whole or left with a partial solution under the established cleanup strategy and priority system. For example, the inaccessible strategy should be made flexible enough such that an owner is not unnecessarily left with a long-term condition that would effect re-sale or reuse of the property. At a minimum, long-term assurances should be provided.

Changes to the cost and scope occur as the extent of contamination is identified in-process. Unmarked utilities predating utilities maps, and historical fill materials act as conduits for contamination to migrate to deeper zones than originally anticipated. These features complicate the task of identifying all impacted areas prior to the actual excavation of the site. Adequate contingencies need to be provided for.

4. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Not applicable at present. Long-term monitoring not in effect yet.

SLAPS 5-YEAR REVIEW SITE INSPECTION CHECKLIST

I. I. SITE INFORMATION

Site Name: SLAPS	Date of Inspection: April 8 – 10, 2003
Site Location: Hazelwood /	EPA ID:
Berkeley, Missouri	
EPA Region: Region 7	Weather/temp: Sunny 40°
Agency leading the five-year review:	Attachments:
U. S. Army Corps of Engineers	Inspection team roster: J. Mattingly (USACE), D. Wall
	(USEPA), J. Groboski (MDNR)
	$\sqrt{\text{Site map (attached)}}$
Response Action Includes:	
$\sqrt{}$ Excavation of radiologically contaminated soil	and shipment to an out-of-state disposal facility
Access controls	
Surface water collection and treatment	
$\sqrt{\text{Groundwater monitoring}}$	
√ Other (Air monitoring & Vegetative Cover)	

II. Interviews

Interview sheets for each individual will be maintained.

III. On-Site Documents & Records Verified (Check all that apply.)

1. O&M Documents			
O&M Manual	Readily available ڤ	Update needed ڦ	\sqrt{NA} at present
As-built drawings	Readily available	Update needed ٹ	۔ NA ڤ
Maintenance logs	Readily available	Update needed ٹ	NA ڤ
Remarks:			
2. Site-Specific Health & Safety Plan			
Site-Specific Health & Safety Plan	Readily available	Update needed ڦ	NA ڤ
Contingency plan/emergency response plan	√ Readily available	Update needed ڦ	NA ڤ
Remarks:			
3. O&M and OSHA Training Records			
O&M Training Records	Readily available ٹ	Update needed ٹ	
OSHA Training Records	Readily available	Update needed ٹ	NA ڤ
Remarks:			
Training tracked in database and contractor ke	eps documents in databas	se. Database is audited	regularly.
4. Permits and Service Agreements			
Air discharge permit	√ Readily available	Update needed ٹ	NA ث
Effluent discharge (MSD)	Readily available	Update needed ٹ	NA ڤ
Waste disposal	Readily available	Update needed ٹ	NA ڤ
NPDES permit (or ARAR equivalent)	Readily available	Update needed ٹ	NA ڤ
Other (see remarks)	Readily available	Update needed ٹ	NA ڤ
Remarks	•	-	
Special use permit from St. Louis Count Dept.	of Highways and FAA p	ermits available on-site	2.
- ·			

5. Groundwater Monitoring				
Groundwater Monitoring Records	√ Readily available	Update needed ڤ	NA ڤ	
Remarks:				

6. Discharge Compliance Records			
Air	√ Readily available	Update needed ڦ	NA ڤ
Water (effluent)	√ Readily available	Update needed ڤ	NA ڤ
Remarks:			
7. Access / Security	D 111 11.11	877 1	* > 7.4
Daily Access/Security Logs	Readily available	Update needed ڦ	NA ڤ
Remarks:			
8. Institutional Controls			
Long-term Stewardship Plan	Readily available ڤ	Update needed ڤ	\sqrt{NA} NA at present
Notification letters to city, county,	Readily available	Update needed ڦ	_ NA ڦ
state, utilities, property owners			
regarding radiological			
contamination and measures to			
protect human health/environment			1 274
Deed restrictions in place	Readily available ڤ	Update needed ٹ	√ NA at present
Remarks:			
IV. O&M Costs			\sqrt{NA} at present
1.O&M Organization			
	Contractor for State ق	PRP in-house ف	
	Federal Facility in-house فــ	Contractor for Fed	deral Facility
Other (explain) ٿ			
2.O&M Cost Records	N == .		
	Up to date		sm/agreement in place
Original O&M cost estimate		Breakdown attac 🎍	hed
Total annual cost by year for review	neriod if available:		
Total allitual cost by year for leview	period if dvalidole.		
From To		Breakdown attach ف	ied
Date I	Date Total cost		
From To		Breakdown attach 🎍	ied
Date I	Date Total cost		
From To		Breakdown attach ف	ied
	Date Total cost		
FromTo		Breakdown attach ف	ied
	Date Total cost		1
FromTo	Data Tatal and	Breakdown attach ف	iea
Date I 3. Unanticipated or Unusually High	Date Total cost		and reasons):
Remarks:	gn Oceni Custs During Ke	view i citou (Describe Costs	and ivasuits).
Terraria.			

V. Access & Institutional Controls

1. Fencing				
Fencing condition $\sqrt{\text{Good}}$	Needs mai ٹ	ntenance	Locatio ف	on shown on map
Gate/lock condition $\sqrt{\text{Good}}$	Needs maintenance ف		Location shown on map	
Rad Rope, Signs and other Security measures				on shown on map
Remarks:				•
Contact information available on signs posted for site.				
2. Institutional Controls (ICs)			√ NA at	present
Implementation and enforcement				
Site conditions imply ICs not properly implemented	Yes ڤ	No ث		NA ڤ
Site conditions imply ICs not being fully enforced	Yes ڤ	No ث		NA ڤ
Type of monitoring (e.g. self-reporting, drive by):				
Frequency:				
Responsible agency:				
Contact Info (Name, Title, Date, Phone #):				
Departing is up to data	Yes ڤ	No ث		NA ڦ
Reporting is up-to-date		No ف No ف		NA ف NA ڤ
Reports are verified by the lead agency Specific requirements in deed or decision documents n	Yes ث Yes ث	No ف No ف		NA ث NA
Violations have been reported	Yes ث	No ف No ف		NA ث
Remarks:	G res	<u> </u>		G NA
Remarks.				
3. Adequacy				
	ICs are inade قـ	equate		√ NA at present
Remarks:		1		
4. General				
Evident ف Evident	Type:			√ NA
Evident ف Evident	Type:			<u>√</u> NA
Vandalism/trespassing	Type:			<u>√</u> NA
Remarks:				
VI. General Site Conditions				
1. Road Damage √ Not evident	ent & shown on	-cite man		
Remarks:	THE & SHOWN ON	-site map		
Remarks.				
2. Erosion √ Not evident	ent & shown on	-site man	Depth:	Areal extent:
Remarks:	ant & shown on	site map	Deptii.	Tirear extent.
Termino.				
3. Vegetative Cover (where response action complete	and/or action r	not yet cond	lucted)	
√ Cover properly established			Type:	
Cover shows signs of stress			J 1	
No cover ف				
Remarks:				

4 41			\$ 3.T.4
	er (armored rock, concrete, etc.)		NA ڦ
Remarks:			
Properly			
established.			
5. Wet Areas/Wate	er Damage		
	Not evident ڦ		
	Wet areas/water damage evident and shown on ma	p Areal extent:	
	Ponding evident and shown on map	Areal extent:	
	Seeps evident and shown on map	Areal extent:	
	ें Soft subgrade evident and shown on map	Areal extent:	
Remarks:	Soft Subgrade evident and Shown on map	THOUT CALCILE.	
	nt in SU27, which is undergoing a removal action,	is being numbed to h	olding basins for
treatment.	in in 3027, which is undergoing a removal action,	is being pumped to in	olding basins for
6. Slope Instability			1
	$\sqrt{\frac{1}{2}}$ Not evident		
	Slides evident and location shown on map	Areal extent	
Remarks:			
7. Dust Suppression	n		
NA ڤ			
√ Procedures establi	ished Methods Utilized: Spraying water		
Procedures establ	ished, additional needed		
Needed ڤ			
Remarks:			
8. Air Monitoring		NA ڤ	
	monitors in place and locations identified on-site map	1,12	
	neter air monitors in place and locations identified on-si	te man	
	ioning properly $\stackrel{\square}{\hookrightarrow}$ Air monitors require maintenance		quire renlacement
Remarks:	doming property — All monitors require maintenance	All moments rec	quire replacement
Kelliaiks.			
0 D-1 C Chii		NA ڤ	
9. Rail Car Shippir			\$ NT
Shipping:	Manifests accurate and complete	Yes ف	No ت
Packaging:	Burrito bags properly secured and tied	$\frac{}{}$ Yes	No ڤ
	Cars loaded properly to prevent holes in the burrito b		No ٿ
Labeling:	All containers, barrels, equipment labeled correctly	$\sqrt{\text{Yes}}$	No ڤ
Placards:	Railcars properly placarded	$\sqrt{\text{Yes}}$	No ڤ
	Placards secured properly to railcars	$\sqrt{\text{Yes}}$	No ڤ
Remarks:		_	
VIII CC XX :	Called and Transfer and D. J. D. J. C.	01)	
VIII. Surface Water	Collection & Treatment (During Response Action C	Only)	
1. Storm water/Ero	osion Control devices	NA ڤ	
√ Silt fencing	$\sqrt{\text{Straw bales}}$ $\sqrt{\text{Berms}}$	√ Ditches	
Remarks:			
TTIMINO.			

2. Water Management Interfaces Interfaces between areas addressed Contaminated water from excavation Remarks:	and excavations protected		
3. Water Treatment System			
•	Oil/water separation	√ Bioremedi	ation
	Carbon adsorbers	<u>v</u> Bioremean	ation
$\sqrt{\text{Filters:}}$	Jaruon ausoruers		
Carbon Filters			
ط Additive:			
Others			
	Needs maintenance		
Sampling ports properly marked ف	and functional		
Sampling/maintenance log displ	ayed and up to date		
$\sqrt{}$ Equipment properly identified			
Quantity of groundwater treated ف	annually: NA at pre	esent	
Quantity of surface water treated	annually: 2 million	gallons per year treated	
Remarks:	-		
4. Tanks, Vaults, Storage Vessels		N ث	A
	condary containment	Needs maintenar ف	nce
Remarks:			
Water storage tanks and sump basin	is being used to hold water	r.	
5. Surface Water Collection Stru			NA ف
$\sqrt{\text{Collection Structures, Pumps, & I}}$		√ Good condition	
Remarks:			
6. Surface Water Collection Sp	are Parts &		
Equipment			
ش Readily available	Good condition ٿ	Requires upgrade ف	Needs to be provided ف
Remarks:		1 18	1
Presumed. Wells and spare equipm	ent maintained by separat	e contractor off-site.	
7. Sedimentation Basin	√ Functioning		NA ڤ
$\sqrt{\text{Liner in good condition}}$	Needs maintenance ث		1111
$\sqrt{\frac{1}{1000000000000000000000000000000000$	Needs maintenance ڤ		NA ڤ
$\sqrt{\frac{1}{1000000000000000000000000000000000$	Erosion evident and	located on-site man	-141
Remarks:	— Erosion evident and	located on-site map	
Remarks.			
8. Outfalls	√ Functioning		NA ڤ
o. Guttans	$\sqrt{\frac{1}{1000000000000000000000000000000000$	ent/unplanned release	Erosion evident
Remarks:		one amplantica release	Erobion Crimon
9. Outlet Works		Functioning ٹ	√NA
Remarks:			<u></u>

10. Perimeter Ditc	Applicable ف Applicable	NA ڤ	
Siltation	$\sqrt{}$ Not evident		
	Evident and location shown on-site map	Areal extent	Depth
Vegetative Growth	Present but does not impede flow		
	Impedes flow and location shown on site map	Areal extent	Depth
Erosion	Not evident		
	Evident and location shown on-site map	Areal extent	Depth
Remarks:	-		

IX. Ground-water Monitoring

1. Groundwater Monitoring Wells		Applicable	NA ث			
Properly secured/locked	$\sqrt{}$ Functioning	Routinely sam ف	pled			
Good condition	Evidence of leakage at pe	netrations 🌼 Needs mainten	ance			
Remarks:						
2. Monitoring Well Spare P	2. Monitoring Well Spare Parts and Equipment					
Good cond ڦ Readily	Requ ث	ires upgrade	s to be provided			
available						
Remarks:			_			
Presumed. Wells and spare equipment maintained by separate contractor off-site.						

X. Other Remedies

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. Overall Observations

1. Implementation of the Remedy

Describe issues and observations relating to response action. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plum, minimize infiltrations and gas emission, etc.).

Excavation of radiologically contaminated soil and material from the site is being accomplished. Water management is the site's biggest problem. The USACE seems to be managing the water rather than being managed by it.

2. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Not applicable at present.

3. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope if O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be comprised in the future.

Selenium is the one unexpected issue that came up. It effected water treatment and storage but the team seems to have an answer with bioremediation. Cold temperatures hinder its effectiveness. Schedules must take this into account. Addressing the selenium and being limited by the ambient temperature may draw out completion of the response action at the site.

4. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

The USACE should be very cautious of public perceptions about the work being performed at the site. No fugitive dust should be tolerated, whether from contaminated or uncontaminated sources.

SLAPS VP'S 5-YEAR REVIEW SITE INSPECTION CHECKLIST

I. Site Information

Site Name: SLAPS VPs	Date of Inspection: April 8 – 10, 2003		
Site Location: Berkeley / Hazelwood, Missouri	EPA ID:		
EPA Region: Region 7	Weather/temp: Cloudy 40°		
Agency leading the five-year review:	Attachments:		
U. S. Army Corps of Engineers	Inspection team roster: J. Mattingly (USACE), D. Wall		
	(USEPA), J. Groboski (MDNR)		
	Site map (attached)		
Response Action Includes:			
$\sqrt{}$ Excavation of radiologically contaminated soil as	nd shipment to an out-of-state disposal facility		
Access controls			
Surface water collection and treatment			
$\sqrt{\text{Groundwater monitoring}}$			
Other (Air monitoring & Vegetative Cover)			

II. Interviews

Interview sheets for each individual will be maintained.

III. On-Site Documents & Records Verified (Check all that apply.)

1. O&M Documents			
O&M Manual	Readily available ٹ	Update needed ث	\sqrt{NA} at present
As-built drawings	Readily available ف	$\sqrt{\frac{1}{2}}$ Update needed	NA ڤ
Maintenance logs	Readily available	Update needed ف	NA ڤ
Remarks:	-	-	
Need to certify that VPs meet final remediation approved.	on goals identified in the	e North St. Louis Cou	nty sitesROD once it is
2. Site-Specific Health & Safety Plan			
Site-Specific Health & Safety Plan	√ Readily available	Update needed ث	NA ڤ
Contingency plan/emergency response plan	√ Readily available	Update needed ٹ	NA ڤ
Remarks:			
3. O&M and OSHA Training Records			
O&M Training Records	Readily available ف	Update needed ث	\sqrt{NA} at present
OSHA Training Records	√ Readily available	Update needed ث	NA ف
Remarks:			
Need contractor training records in a centrally	located area.		
4. Permits and Service Agreements			
Air discharge permit	Readily available ٹ	Update needed ث	<u>√</u> NA
Effluent discharge (MSD)	Readily available ڤ	Update needed ث	\sqrt{NA} at present
Waste disposal	Readily available ٹ	Update needed ث	\sqrt{NA} at present
NPDES permit	Readily available ٹ	Update needed ث	<u>√</u> NA
Other	Readily available ڤ	Update needed ث	NA ف
Remarks			

5. Groundwater Monitoring		
Groundwater Monitoring Records	U ف Readily available ف	Update needed \sqrt{NA}
Remarks:		
6. Discharge Compliance Records	<u> </u>	
Air		Update needed \sqrt{NA}
Water (effluent)	ا ف Readily available ت	Jpdate needed \sqrt{NA}
Remarks:		
7. Access / Security		
Daily Access/Security Logs	ا ف Readily available ف U	Jpdate needed \sqrt{NA}
Remarks:		
8. Institutional Controls		,
Long-term Stewardship Plan	Readily availabl ف	
Notification letters to city, cou		le
utilities, property owners regarding		
contamination and measures to pro	otect human	
health/environment	* D 411 11-1-1	1
Deed restrictions in place Remarks:	Readily availabl ف	le <u>√</u> Update needed <u>√</u> NA at present
Remarks.		
IV. O&M Costs		\sqrt{NA} at present
1.O&M Organization		
	Contractor for State ف	PRP in-house ف
	Federal Facility in-house ف	Contractor for Federal Facility ف
Other (explain)		
2.O&M Cost Records	* 11 4 1 4	* T 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Up to date	Funding mechanism/agreement in place Breakdown attached
Original O&M cost estimate		Greakdown attached
Total annual cost by year for review	period if available:	
From To		ے Breakdown attached
	Date Total cost	
From To		Breakdown attached ف
Date	Date Total cost	
From To		Breakdown attached ف
	Date Total cost	
FromTo		Breakdown attached ف
	Date Total cost	* Decal decompany of
FromTo	Data Tatal and	Breakdown attached ث
	Date Total cost	Period (Describe costs and reasons):
Remarks:	gn Oxivi Custs During Review	1 criou (Describe costs and reasons).
ixemarks.		

V. Access & Institutional Controls

1. Fencing				<u>√</u> NA	
Fencing condition $\sqrt{\text{Good}}$			naintenance		tion shown on map
Gate/lock condition $\sqrt{\text{Good}}$	ِ ڤ	Needs ma	intenance		tion shown on map
Rad Rope, Signs and other Security m	easures			Locat ڤ	tion shown on map
Remarks:					
Contact information available on signs	posted for site.				
2. Institutional Controls (ICs)				√ NA a	t present
Implementation and enforcement					
Site conditions imply ICs not properly i	mplemented	Yes ث	No ث		NA ڤ
Site conditions imply ICs not being full		Yes ث	No ڤ		NA ڤ
Type of monitoring (e.g. self-reporting,					
Frequency:	3,				
Responsible agency:					
Contact Info (Name, Title, Date, Phone	#)·				
Contact into (tvaine, Title, Bate, Thone	<i>")</i> .				
Reporting is up-to-date			Yes ڤ	No ڤ	NA ڤ
Reporting is up to date Reports are verified by the lead agency			Yes ڤ	– ۱۹۵ No	– ۱۷۸ NA ڤ
Specific requirements in deed or decision	on documents met		Yes ڤ	No ث	NA ث
Violations have been reported	ii documents met		۲es ث	No ف No	NA ث
Remarks:			<u> </u>	<u></u>	G NA
Remarks.					
2 4 1					
3. Adequacy	> т	<u> </u>	1 ,		JATA
Adequacy iCs are adequate	ا ف	Cs are ina	dequate		\sqrt{NA} at present
Remarks:					
4. General					
		ype:	See rema	ırks	NA ف
		pe:			<u>√</u> NA
Vandalism/trespassing	Evident Ty	pe:			<u>√</u> NA
Remarks:					
Changes noted in the landuse changing	ng from vacant to	commer	cial (VP-24,	& 36) an	d vacant to recreational
(VP-35).				,	
VI. General Site Conditions					
1. Road Damage ت Not	evident	Eviden	t		
Remarks:		<u>. Dyraeri</u>			
Ruts along roadways (see VP-37) cause	ed by private truck	ers create	snecial area	s of conce	rn to be addressed where
contamination can be moved to previou			special area	3 Of Conce	in to be addressed where
	evident	انتين Evider ف		Depth:	Areal extent:
Remarks:	evident	- Evidei	IL	Deptii.	Aleai extent.
Remarks.					
2 17 4 4 6 7 1	. 1.	1/		1 (1)	
3. Vegetative Cover (where response a		d/or action	n not yet con		
$\frac{\sqrt{\text{Cover properly}}}{\sqrt{\text{Cover properly}}}$,		Type:	
	signs of stress (in a	ireas)			
No cover ف					
Remarks:					
I and the second					

4. Alternative Cove	r (armored rock, concrete, etc.)	1	√ NA at present
Remarks:			
5. Wet Areas/Water	r Damage		
	√ Not evident		
	Wet areas/water damage evident and shown on map	Areal extent:	
	Ponding evident and shown on map	Areal extent:	
	Seeps evident and shown on map	Areal extent:	
	Soft subgrade evident and shown on map	Areal extent:	
Remarks:			
6. Slope Instability			
-	Not evident		
	Slides evident and location shown on map	Areal extent	
Remarks:		•	
7. Dust Suppression	1	NA at presen	t
	Methods Utilized: Spraying water		·
established			
Procedures establi ف	ished, additional needed		
Needed ڤ	,		
Remarks:			
8. Air Monitoring		\sqrt{NA} NA at presen	t
Site perimeter air	r monitors in place and locations identified on-site		
map			
Excavation perim ف	eter air monitors in place and locations identified		
on-site map			
Air n ڤ	nonitors ف Air monitors require maintenance ف Air	monitors require	replacement
functioning properly			
Remarks:			
9. Rail Car Shippin	g	NA at presen	t
Shipping:	Manifests accurate and complete	Yes ڤ	No ڤ
Packaging:	Burrito bags properly secured and tied	Yes ڤ	No ڤ
3 0	Cars loaded properly to prevent holes in the burrito bags	Yes ڤ	No ڤ
Labeling:	All containers, barrels, equipment labeled correctly	Yes ڤ	No ڤ
Placards:	Railcars properly placarded	Yes ڤ	No ڤ
	Placards secured properly to railcars	Yes ڤ	No ڤ
Remarks:			
		wever, material	storage area was
inspected for proper	labeling and storage. No problems noted.		

VIII. Surface Water Collection & Treatment (During Response Action Only)

 \sqrt{NA} at present

1 Storm motor/Eucaion Control design			√ NA		
1. Storm water/Erosion Control device		. Domes			
ت Silt fencing ت Straw bale	S	Berms ف	Ditches ف		
Remarks:					
A 337 / 34 / C					
2. Water Management Interfaces	,		√ NA	÷ • •	> 3.T
Interfaces between areas addressed and ex				Yes ث	No ث
Contaminated water from excavation area	s detained and s	ampled prior	to discharge?	Yes ڤ	No ڤ
Remarks:					
				1374	
3. Water Treatment System			1 m 1 m 1	<u>√</u> NA at	present
	ter separation		Bioremediation 🏝		
Air stripping ت Carbon	adsorbers				
Filters:					
ف Additive:					
Others ڤ					
	maintenance				
Sampling ports properly marked and fu					
Sampling/maintenance log displayed a ف	nd up to date				
Equipment properly identified ف					
Quantity of groundwater treated annua	ılly:				
Quantity of surface water treated annua	ally:				
Remarks:					
4. Tanks, Vaults, Storage Vessels			<u>√</u> NA at pre	sent	
Proper secon ف Good condition	ndary containme	Ne ٹ nt	eds maintenance		
Remarks:					
5. Surface Water Collection Structures	, Pumps, Pipeli	ines ۾	Applicable	√ NA at	present
<u>د</u> Collection Structures, Pumps,	Good c 進 &	ondition	Needs ف	maintenanc	ee
Electrical					
Remarks:					
6. Surface Water Collection Spare Part	ts & Equipmen	t		√ NA at	present
ق Readily available ق Good con	ndition \Box	Requires up	Needs ڦ	to be provi	
Remarks:			<u> </u>	· · · · ·	
7. Sedimentation Basin	Functioning ٹ	<u>g</u>		√NA	
Liner in good condition	Needs mai ف	•			
Outlet rock in good condition	Needs mai ف		[ڦ	NA	
Erosion not evident			ated on-site map		
Remarks:	Erosion C	Tacini ana 1000	ited on site map		
TOTALINO.					
8. Outfalls	Functionin ٹ	σ	1	√ NA	
o. outilis				۲۰۸۸ Erosion 6 ق	evident
Remarks:	Sampica ai	1411 0 10110	an planned release	LIODIOII	
Terruins.					
9. Outlet Works		Func	tioning	√ N	Ι Δ
Remarks:		- I unc	noning	<u>v</u> 1	11.7
Kemarks.					

10. Perimo	eter Ditches / Off-site Discharge 🗀 Applical	ble <u>√</u> NA	
Siltation	Not evident		
	Evident and location shown on-site map	Areal extent	Depth
Vegetativ	Present but does not impede flow		
e Growth	-		
	Impedes flow and location shown on site map	Areal extent	Depth
Erosion	$\sqrt{}$ Not evident		
	Evident and location shown on-site map	Areal extent	Depth
Remarks:			

IX. Ground-water Monitoring

1. Groundwater Monitoring	g Wells	Applicable ڤ	<u>√</u> NA
Properly secured/locked ف	Functioning ف	Routinely sampled ف	
Good condition ٹ	Evidence of leakage at penetrat	ions ف Needs maintenance	
Remarks:			

X. Other Remedies

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. Overall Observations

1. Implementation of the Remedy

Describe issues and observations relating to response action. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plum, minimize infiltrations and gas emission, etc.).

Primary action required by the site at present is to ensure property owners, utility companies, and municipalities know the location of the contamination and how to request assistance. No other issues noted at the present.

2. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Not applicable at present.

3. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope if O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be comprised in the future.

VP contamination maps need updating so that cleared areas, contaminated areas and questionable areas are clearly identified. Also need to keep a close eye on ruts along roadways created by large trucks.

4. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

Monitor traffic ruts in shoulders of roadways and monitor land development / sale of VPs. A discussion of land developments, use changes (residential, recreational, commercial or industrial) and sales should be included in annual reports on the VPs.

HISS 5-YEAR REVIEW SITE INSPECTION CHECKLIST

I. Site Information

Site Name: HISS	Date of Inspection: April 8 – 10, 2003		
Site Location: Hazelwood, Missouri	EPA ID:		
EPA Region: Region 7	Weather/temp: Cloudy 40°		
Agency leading the five-year review:	Attachments:		
U. S. Army Corps of Engineers	Inspection team roster: J. Mattingly (USACE), D. Wall		
	(USEPA), J. Groboski (MDNR)		
	$\sqrt{\text{Site map (attached)}}$		
Response Action Includes:			
$\underline{\lor}$ Excavation of radiologically contaminated soil a	nd shipment to an out-of-state disposal facility		
Access controls			
$\underline{\checkmark}$ Surface water collection and treatment			
$\sqrt{\text{Groundwater monitoring}}$			
Other (Air monitoring & Vegetative Cover)			

II. Interviews

1. O&M Documents

5. Groundwater Monitoring

Remarks:

Groundwater Monitoring Records

Interview sheets for each individual will be maintained.

III. On-Site Documents & Records Verified (Check all that apply.)

O&M Manual	Readily available ڤ	Update ف	e needed	\sqrt{NA} at present
As-built drawings	Readily available	Update ف	e needed	NA ڤ
Maintenance logs	√ Readily available	Update ف	e needed	NA ث
Remarks:				
2. Site-Specific Health & Safety P	lan			
Site-Specific Health & Safety Plan	<u>√</u> Readil	ly available	Update needed ف	NA ف ا
Contingency plan/emergency respon	se plan <u>√</u> Readil	ly available	Update needed ف	NA ف ا
Remarks:				
3. O&M and OSHA Training Rec	ords			
O&M Training Records		ily available	Update needed ف	
OSHA Training Records	<u>√</u> Readil	ly available	Update needed ف	NA ڤ ا
Remarks:				
Need contractor training records in a centrally located area.				
4. Permits and Service Agreement				
Air discharge permit	Readily available ٹ	Update ف	e needed	<u>√</u> NA
Effluent discharge (MSD)	Readily available ڤ	Update ف		\sqrt{NA} at present
Waste disposal	eadily available ڤ	Update ف	e needed	\sqrt{NA} at present
NPDES permit	√ Readily available	Update ف	e needed	NA ڤ
Other (see remarks)	Readily available ڤ	Update ف	e needed	NA ڤ
Remarks				
Hazardous Waste Generators Permit available on-site. Also, although no permit has been issued requiring it, air				
discharges are monitored and reporte	ed in the Annual Environ	mental Moni	toring Report.	
_				
	·	·		·

Update needed ٹ

NA ث

 $\sqrt{}$ Readily available

6. Discharge Compliance Records	S		
Air	√ Readily available	Update needed ڦ	NA ڤ
Water (effluent)	$\sqrt{1}$ Readily available	Update needed ف	NA ڤ
Remarks:	<u> </u>	- F	
1.55.1.56.1			
7. Access / Security	1		
Daily Access/Security Logs	Readily available	Update needed ڤ	NA ٿ
Remarks:			
8. Institutional Controls			,
Long-term Stewardship Plan	Readily av ٹ		\sqrt{NA} at present
Notification letters to city, coun	ty, state, √ Readily av	Update needed ف	NA ف
utilities, property owners	regarding		
radiological contamination and me	asures to		
protect human health/environment			
Deed restrictions in place	Readily av ف	Update needed ف ailable	\sqrt{NA} at present
Remarks:	•	-	-
IV. O&M Costs			\sqrt{NA} at present
1.O&M Organization			
State in-house ف	Contractor for State ف	PRP in-house 🏜	
Contractor for PRP ف	Federal Facility in-hou ف	Sontractor for Fe ف	deral Facility
Other (explain) ڤ	·		Ž
2.O&M Cost Records			
ه Readily available	Up to date ف	Funding mechan ف	ism/agreement in place
Original O&M cost estimate	ت Breakdown attac		
Total annual cost by year for review	period if available:		
	•		
From To		ے Breakdown attac	hed
Date	Date Total co		
From To		ے Breakdown attac	hed
	Date Total co		
From To		Breakdown attacl ف	hed
Date	Date Total co	ost .	
From To		Breakdown attacl ف	hed
	Date Total co		
From To		Breakdown attacl ف	hed
	Date Total co		
3. Unanticipated or Unusually Hi			s and reasons):
Remarks:	<u> </u>	(= 222222 4000	··

V. Access & Institutional Controls

1. Fencing			
Fencing condition $\sqrt{\text{Good}}$	Needs maintenance ف	Location shown on map ف	
Gate/lock condition $\sqrt{\text{Good}}$	Needs maintenance ف	Location shown on map	
Rad Rope, Signs and other Security measures		Location shown on map	
Remarks:		•	
Contact information available on signs posted for site.			
2. Institutional Controls (ICs)		\sqrt{NA} at present	
Implementation and enforcement			
Site conditions imply ICs not properly implemented	Yes ڤ	No ڤ NA	
Site conditions imply ICs not being fully enforced	Yes ڤ	No ڤ NA	
Type of monitoring (e.g. self-reporting, drive by):			
Frequency:			
Responsible agency:			
Contact Info (Name, Title, Date, Phone #):			
Departing is up to dete	,	No ث NA	-
Reporting is up-to-date	Yes	NA ف No ف NA ف No ف	
Reports are verified by the lead agency	Yes ث		
Specific requirements in deed or decision documents r		NA ف No ف	
Violations have been reported	Yes ڤ	NA ڤ No ڤ NA	
Remarks:			
3. Adequacy			
	ICs are inadequate ف	\sqrt{NA} NA at pres	sent
Remarks:	100 are madequate	<u></u> 1711 at pro-	
4. General			
Evident ت Land use changes on-site	Type:	<u>√</u> NA	
Evident ف Land use changes off-site	Type:	√ NA	
Vandalism/trespassing ف Evident	Type:	√ NA	
Remarks:			
VI. General Site Conditions			
1 D. J.D.	. ; Г.: 1 01	4	
1. Road Damage ✓ Not evident Remarks:	Evident & shown on-si ث	te map	
Remarks:			
2. Erosion	Evident (see remarks)	Depth: Areal extent:	
Remarks:	<u> -</u> Evident (see Temarks)	Bepui. Theur extent.	
Erosion noted near clean pile of soil at the back of th	e property where the geofa	bric is showing through The	area
near outfall 001 seems open to erosion due to lack of v	1 1 2	2 2	area
3. Vegetative Cover (where response action complete			
Cover properly established	e una or uetron not yet cond	Type:	
$\sqrt{\text{Cover shows signs of stress}}$	(in areas)	Type.	
No cover في المحتوية	(iii ureus)		
Remarks:			
Water ponding areas are limiting vegetative growth; h	nowever it is noted that the	nresent cover was not intend	ed to
be a permanent cover but rather an interim cover lastir			cu to
4. Alternative Cover (armored rock, concrete, etc.)	-5 and substitute response	NA ف	
Remarks:		•	
Present and looks okay.			

	Not evident ف		
	$\sqrt{\text{Wet areas/water damage evident and shown on map}}$	Areal extent:	
	$\sqrt{\frac{1}{2}}$ Ponding evident and shown on map	Areal extent:	
	Seeps evident and shown on map	Areal extent:	
	$\sqrt{\text{Soft subgrade evident and shown on map}}$	Areal extent:	
Remarks:			
	are present, it is noted that this is a temporary surface that	at will be disturbed	during the final
	te. No corrective actions needed at this time.		
6. Slope Instability			T
	√ Not evident		
D 1	Slides evident and location shown on map	Areal extent	
Remarks:			
7. Dust Suppression	n	√ NA at presen	<u>t</u>
Procedures establi ف		v 1471 at present	
	ished, additional needed		
ن Needed ت	islica, additiolial liceaca		
Remarks:			
Kemarks.			
8. Air Monitoring		NA ڤ	
	monitors in place and locations identified on-site map		
	eter air monitors in place and locations identified on-site ma	an	
		r monitors require i	replacement
properly	8		·P
Remarks:			
9. Rail Car Shippin	ıg	NA ڤ	
Shipping:	Manifests accurate and complete	Yes ث	No ڤ
Packaging:	Burrito bags properly secured and tied	Yes ڤ	No ڤ
	Cars loaded properly to prevent holes in the burrito bags	Yes ڤ	No ڤ
Labeling:	All containers, barrels, equipment labeled correctly	Yes ث	No ڤ
Placards:	Railcars properly placarded	Yes ث	No ڤ
	Placards secured properly to railcars	Yes ڤ	No ڤ
Remarks:			
No shipping being	performed. No on-site response actions underway. He	owever, material s	storage area was
	labeling and storage. No problems noted.	,	C
1 1 1			
VIII Suufaaa Watau	Collection & Treatment (During Degrange Action Only	.)	
	Collection & Treatment (During Response Action Only		
		NA ق	
√ Silt fencing	√ Straw bales	√ Ditches	
Remarks:			
2 337-4 3.5	ent Interfaces هٔ NA		
2. Water Managem		amination 9	Vog SNI
	reas addressed and excavations protected against cross control		No ف Yes
	from excavation areas detained and sampled prior to discha	rge? $\underline{\vee}$	No ڦ No
Remarks:			

5. Wet Areas/Water Damage

3. Water Treatment System				NA at present
Metals removal ف	Oil/water separation	Biorer ف	nediation	
Air stripping ف	Carbon adsorbers ف			
ت Filters: څ Additive:				
ے Additive. Others ڤ				
Good condition ف	Needs maintenance ف			
Sampling ports properly ma				
Sampling/maintenance log				
Equipment properly identif				
Quantity of groundwater tro				
Quantity of surface water to				
Remarks:				
4 TD 1 X7 14 C4 X7	T		./> ./>	
4. Tanks, Vaults, Storage Vo Good condition ن Pro			√ NA at present	
Remarks:	per secondary containment	nt <u> </u>	enance	
Remarks.				
5. Surface Water Collection	Structures, Pumps, Pipe	Applicable ف	· √]	NA at present
Collection Structures, Pump ف		Good condition ف	 Needs maint	
Remarks:				
6. Surface Water Collection				NA at present
,	bood condition	Requires upgrade 🍮	Needs to be ف	provided
Remarks:				
7. Sedimentation Basin	Functioning		√ 1	NA at present
Liner in good condition	Needs maintenance ف		<u>_v</u>	Tir at present
Outlet rock in good	Needs maintenance ڤ		NA ڦ	
condition				
Erosion not evident 🍮	Erosion evident and l	ocated on-site map		
Remarks:				
	- In		5374	
8. Outfalls	√ Functioning		NA ف ت ت ت	
Damada	$\sqrt{\text{Sampled after rail ever}}$	nt/unplanned release	Erosion eviden ڦ	t
Remarks:				
9. Outlet Works		Functioning ف		√NA
Remarks:		1 44		<u></u>
10. Perimeter Ditches / Off-s		N ف Applicable	A	
Siltation	Not evident 🏝			
		tion shown on-site map	Areal extent	Depth
Vegetative Growth	$\sqrt{\frac{1}{2}}$ Present but does r			
	-	and location shown on	Areal extent	Depth
Engrica	site map			
Erosion	√ Not evident	tian aharum an aita man	Araal autant	Donth
Remarks:	Evident and loca	tion shown on-site map	Areal extent	Depth
remarks.				
IX. Ground-water Monitorin	g			
1. Groundwater Monitoring	7	Applicable		NA ف
1. Sivunamatti midilitti ili		1 Tippiicaule		- 1 11 1

Wells		
Properly secured/locked	√ Functioning	Routinely sampled ف
Good condition	Evidence of leakage at penetrations ف	Needs maintenance ف
Remarks:		

X. Other Remedies

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

XI. Overall Observations

1. Implementation of the Remedy

Describe issues and observations relating to response action. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plum, minimize infiltrations and gas emission, etc.).

Site is in a maintenance mode pending selection of the final cleanup criteria. Vegetation/top soil erosion (down to the geofabric liner) is evident. Unforeseen delays regarding the selection of the final response actions have lead to the site's current state with weak vegetation in some areas and erosion down to the geofabric liner. Site drainage impedes growth of vegetation although regular seeding attempts continue. It should be noted, however, that most of the site has well establish vegetative growth.

2. Adequacy of O&M

Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.

Not applicable at present.

3. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope if O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be comprised in the future.

Areas with thin vegetative growth leave the potential for dust to become airborne. These areas need to be addressed to avoid public concerns being raised about fugitive dust from the site.

4. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.

The USACE should be very cautious of public perceptions about the work being performed at the site. No fugitive dust should be tolerated, whether from contaminated or uncontaminated sources.